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end

removed from the metal target then coat the wafer surface. It is also possible to utilize CVD techniques in which the titanium is formed from the reaction of TiCl_4 with hydrogen (H_2). In any event, the deposition material should get down into the High Aspect Ratio opening, and reach the bottom surface of the opening or via 20. A collimator may be used to direct the atoms straight down, for better coverage on the contacts.

In the Claims:

Please replace the claims with the respective amended claims below.

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~~1. (Amended) A method for removing polymer etch residue from an etched opening in a silicon wafer device, comprising:~~

~~forming an opening in an insulating layer, wherein a polymer etch residue remains within said opening after the opening forming step; and~~

~~contacting said opening with a plasma generated from ammonia gas to remove said polymer etch residue.~~

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~~6. (Amended) The method of claim 2, wherein said contacting is done at a temperature within the range of about 250 - 500° C.~~

~~29. (Amended) A method of forming a contact opening in a semiconductor device, comprising:~~

~~a) etching a contact opening in an insulative layer in said device down to a polysilicon element of said device; and~~

~~b) cleaning etch residue from said etched opening by contacting said opening with ammonia gas in the form of a plasma.~~